CLAIMS

1. A coated steel product comprising a metallic strip material, **characterized in that** said strip has a coating comprising an electrically insulating layer doped with an alkali metal or a mixture of alkali metals, the thermal expansion coefficient of said metallic strip material being less than $12 \cdot 10^{-6}$ K^{-1} in the temperature range 0-600°C, the electrically insulating layer comprises at least one oxide layer and the oxide layer consists essentially of any of the following dielectric oxides: Al_2O_3, TiO_2, HfO_2, Ta_2O_5 and Nb_2O_5 or mixtures of these oxides, preferably Al_2O_3 and/or TiO_2.

2. Coated steel product according to claim 1, **characterized in that** the metallic strip material has a thickness of 5 to 200 µm, preferably 10 to 100 µm.

3. Coated steel product according to claims 1 or 2, **characterized in that** the electrically insulating layer has a multi-layer constitution of 2 to 10 layers, to ensure efficient electrical insulation.

4. Coated steel product according to claim 3, **characterized in that** each individual oxide layer has a thickness of between 0,01 and 2 µm, preferably between 0,1 and 1,5 µm.

5. Coated steel product according to claim 1 or 4, characterized in that only the layer, or the two layers, most distal from the metallic strip substrate is/are doped with alkali metal(s).

6. Coated steel product according to any of the previoous, **characterized in that** the total thickness of the oxide coating may be up to 20 µm, preferably 1 to 5 µm.

7. Coated steel product according to any of the previous claims, **characterized in that** the electrically insulating layer is coated by a conducting layer, preferably mainly made of molybdenum.

8. Coated steel product according to claim 7, **characterized in that** the molybdenum layer has a thickness of between 0,01 and 5 μm, preferably 0,1 and 2 μm.

9. Coated steel product according to any of the previous claims, **characterized in that** the alkali metal is either Li, Na or K, or mixtures thereof, preferably Na.

10. Coated steel product according to claim 3 or 4, **characterized in that** the individual layers in the multi-layer structure are either made of the same metal oxide or of different metal oxides and that each individual layer is made of one metal oxide or of a mixture of two or more metal oxides.

11. Coated steel product according to any of the previous claims, **characterized in that** it is suitable as a substrate material for the production of flexible $Cu(In,Ga)Se_2$ (CIGS) solar cells.

12. Method for producing a coated steel product according to any of claims 1-11, **characterized in that** the electrically insulating layer(s) and the electrically conducting layer(s) are all deposited in a roll-to-roll electronic beam evaporation process.

13. A flexible $Cu(In,Ga)Se_2$ (CIGS) solar cell **characterized in that** it comprises a coated steel product according to any of claims 1-11.